HOHNER INTRINSICALLY SAFE WIRELESS ENCODERS

Stocked, Distributed, and Supported by

SENSORS INCORPORATED

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hohner

The Hohner Wireless System consists of a battery pack, a transmitter, the encoder and the receiver module. The Transmitter is built onto the encoder and the battery pack can be replaced in the 'hot' zone by anyone. The photo below shows in detail the components.

The data transmission is as follows:

- Encoder to Receiver is WiFi (802.15 protocol) 2.4 GHz. The data packet is binary.
- Data rate is 250 kbs
- Receiver to Controller output is Hardware: RS232, RS485, CAN, USB or 4...20 mA
- Possible protocols can be ASCII, ModBus, ProfiBus, DeviceNet
- The data can be read by HyperTerminal, Excel, Wonderware, Scada, WinWedge, Labview and Daisy
- Hohner can also provide industry standard protocols, specifically to implement IEEE 1451, the standard for smart sensors.

Data output speed / format:

- Incremental Encoder: Pulse triggered (instant)
- Absolute Encoder: 1 position every 20 seconds
- Multiturn Encoder: 1 position every 60 seconds
- Fuel sensor: 1 reading every 60 seconds

These speeds and formats are for about 10 year battery life for 24/7 use, and will be standard. If data has to be read more frequently and quicker, the battery life will go down accordingly. It is very easy for us to do, just a couple of lines in C++, so do not hesitate to ask.

Data security

Secure data transmission - signal is checked 3 times

- 1. Receiver recognizes only this signal with a product specific code
- 2. Data is transmitted with a checksum and verified in the receiver
- 3. 2.4 GHZ base frequency is product specific and has 1 MHz bandwidth in 124 possible channels

A wrong data transmission is not possible. A data transmission can be missed - this has the effect that updating is delayed

Types of compatible encoders and sensors:

- The full range of Hohner encoders are WiFi ready
- The full range of Hohner sensors are WiFi ready

Hazardous Area Certifications:

- Encoders and Sensors are intrinsically safe
- Transmitter is intrinsically safe
- Battery Pack is intrinsically safe
- The certification will be ATEX, IECEx, UL and UL Canada
- They will rated to Zone 0, EEx ia IIC
- The Receiver module will be non sparking
- The certification will be ATEX, IECEx, UL and UL Canada
- The will be rated to Zone 2, EEx n

This means the encoder system can be installed anywhere and the receiver module can be put in a Zone 2 area. Such as outside the drilling cabin to have a better line of sight to the sensors if there happens to be a concrete wall and a whole bunch of metal girders between encoder and receiver.

Sensor / Encoder

Highlights

- EEx ia IIC Intrinsically Safe
- Can be any model of the Hohner range of encoders or sensors, we offer IP66 stainless steel extreme duty encoders to smaller 'simpler' encoders. Hollow shaft and solid shaft
- The clear transmitter section is an integral part of the encoder
- The IP rating between transmitter and encoder is IP66
- The IP rating between transmitter and battery is IP66

Photo

Transmitter

Highlights

- Houses the WiFi antennae
- 100m range
- Clear high strength plastic for optimal transmission of radio frequencies
- The connector is a simple but rugged 'head phone jack' type for the battery pack to connect to
- The thread is for the battery pack to screw into. This ensures there are no shorts.
- The IP rating between transmitter and battery is IP66
- EEx ia IIC Intrinsically Safe

Photo

Battery Pack

Highlights

- About 10 year life time
- Anyone can swap batteries in the 'hot' zone at anytime
- Screws into the transmitter housing in seconds
- As easy as changing TV remote batteries
- The IP rating between transmitter and battery is IP66
- The material of the battery housing will match the material of the encoder or sensor. Be it stainless steel, hard anodized aluminium or powder coated aluminium (shown)
- EEx ia IIC Intrinsically safe

Photo

Battery Pack Part Number Battery -

Where X is one of the following:
H = hard anodized aluminum
P = powder coated aluminum
S = stainless steel

hohner WiFiEx

Series 3000 intrinsically safe absolute multiturn shaft encoder - WiFiEx

3 X K 1 - X X W X - M 2 1 2

| |___| | Resolution

| Output | M212 = 12x12 bit

| 06 = 4...20 mA Exit

Protection 33 = DevicceNet K = Axial

A = IP54 08 = XML RS232 H = Radial

B = IP65 57 = ModBUS

C = IP66 Aluminum

D = IP66 S. Steel

Price: (for encoder + transmitter + battery + receiver
IP54 and 65: From 1800.00 US$
IP66: Aluminum: From 2400.00 US$
IP66: Stainless Steel: From 3200.00 US$
(no cable cost, no barrier cost, no engineer installation cost)

Technical Data

Encoder:

Operating Temp:	-20C to +49C
Housing Material:	Aluminum or St. Steel
Shaft Material:	St. Steel
IP rating:	IP54 up to IP66
Shaft load:	Supports 'system' weight
Humidity:	98% permissible
Shock:	10mg (6msec)
Vibration:	5g (500Hz)
Shaft Speed:	3000 rpm

Transmitter:

Operating Temp:	-20C to +60C
Housing Material:	Clear Makrolon (plastic)
IP rating:	IP66
Humidity:	98% permissible
WiFi Frequency:	2.4 GHz
Data Rate:	250 kbs

Battery Pack:

Operating Temp:	-20C to +60C
Housing Material:	To match encoder
IP rating:	IP66
Humidity:	98% permissible
Type:	Lithium Thyonide Chloride
Life Time:	About 10 years
	1 data transmission per 20 s

Receiver Module:

- Click above for a full description of the outputs that can be generated from the receiver module.
- The default output protocol is RS232, which can be read and viewed with the Hyper Terminal in windows and also with the most common data acquisition software packages such as Labview, Daisy, WonderWare, WinWedge and Excel.
- Other outputs can be DeviceNet, ModBus, 4...20 mA

Function:

The 7 or 10 bit position from the encoder is transmitted to a distant module. As standard, the module is updated every two seconds in order for the system to have a lifetime of 10 years.

Identity:

Each encoder has a unique identity number in case multiple sensors are purchased. The ID numbers can be customer specified. As default, they be the serial number of the device, this way, there will never be conflicting identities on a system.

Certifications

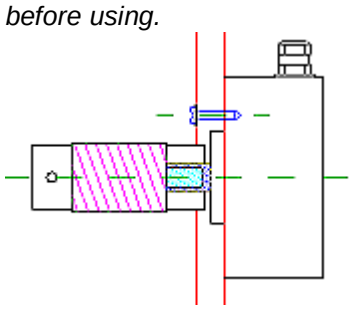
IP 54 or 65 or 66

IECEX (IECEx SIR 08-0015X) certificate

ATEX (SIRA 08ATEX2054X) certificate

Mounting Instructions

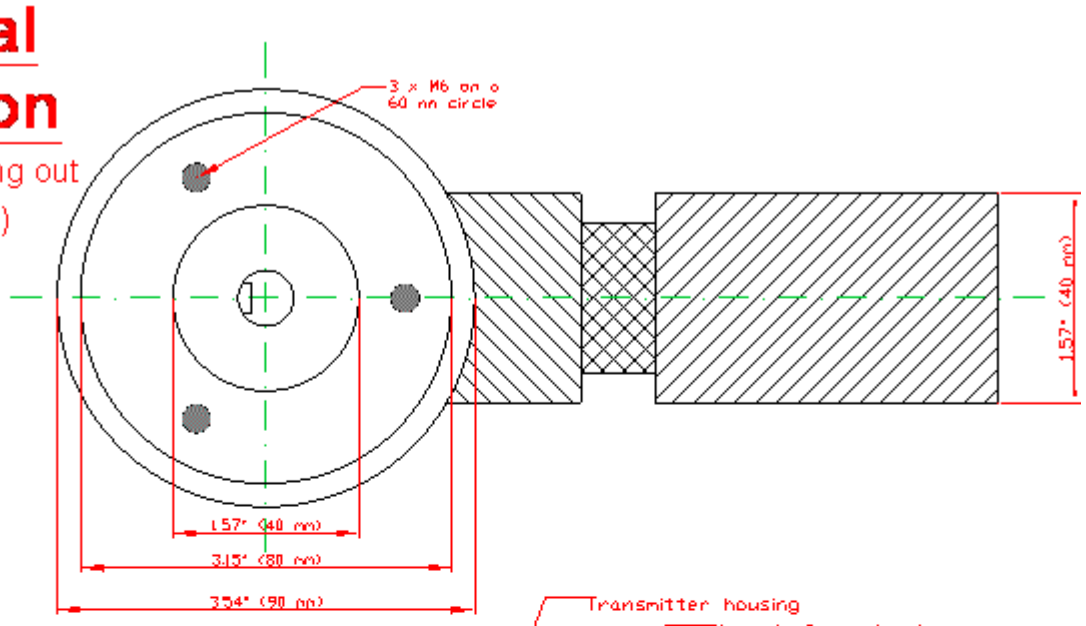
1. Just before installing encoder onto shaft, screw the battery pack in firmly to the transmitter housing (the clear part)
2. Mount the encoder mechanically as you would any other encoder.
3. On the safe side, plug in the receiver module into the PLC or computer and start reading the data in whatever format you have.
4. The battery can be 'hot-swapped' in the field for a new battery if it does run out.
5. *If you will NOT immediately use the encoder, do NOT connect the battery. Only connect the battery right before using.*



Dimensions

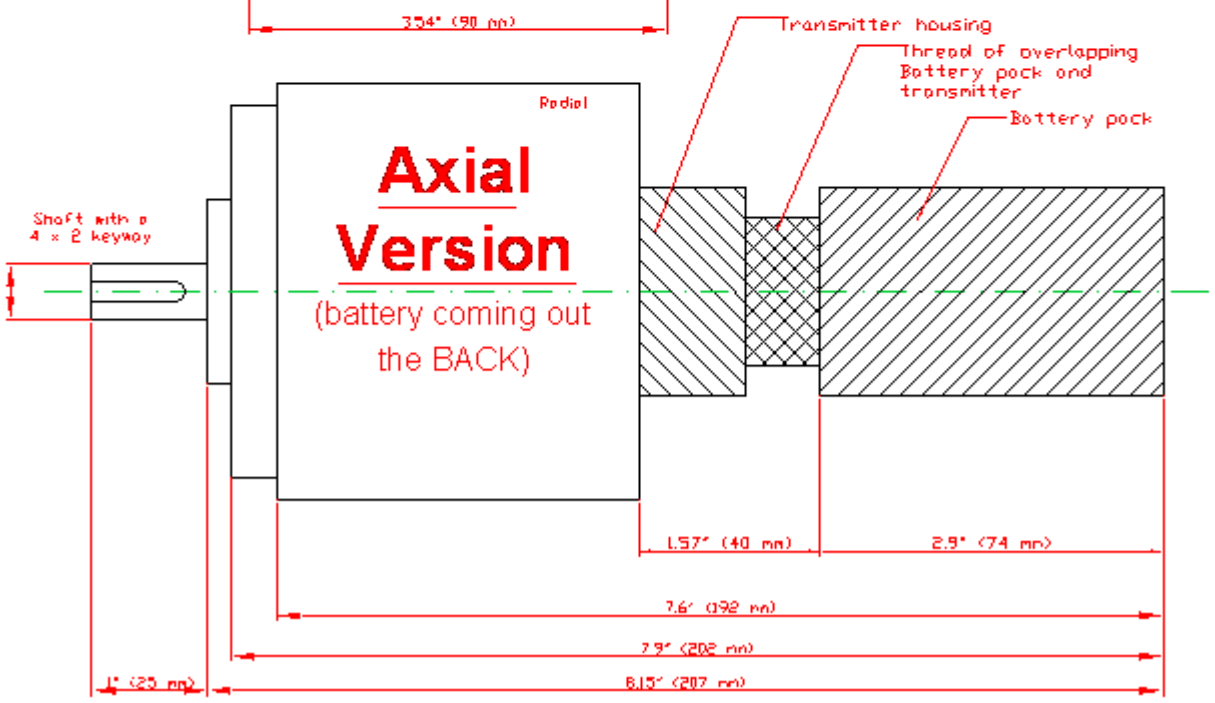
Radial Version

(battery coming out the SIDE)



Axial Version

(battery coming out the BACK)



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Series 08 incremental intrinsically safe hollow shaft encoder - WiFiEx

0 8 X X - X X W H - X X X X

Shaft Size	Incremental Output	Resolution - ppr
10 = 10 mm	13 = Standard Quadrature	
12 = 12 mm	33 = DeviceNet	
	08 = XML RS232	
	57 = ModBUS	

Price: (for encoder + transmitter + battery + receiver)
From 1600.00 US$ (no cable cost, no barrier cost, no engineer installation cost)

Technical Data

Encoder:

Operating Temp:	-20C to +49C
Housing Material:	Stainless Steel
Shaft Material:	Stainless Steel
IP rating:	IP66M
Shaft load:	Supports 'system' weight
Humidity:	98% permissible
Shock:	10mg (6msec)
Vibration:	5g (500Hz)
Shaft Speed:	3000 rpm

Transmitter:

Operating Temp:	-20C to +60C
Housing Material:	Clear Makrolon (plastic)
IP rating:	IP66
Humidity:	98% permissible
WiFi Frequency:	2.4 GHz
Data Rate:	250 kbs

Battery Pack:

Operating Temp:	-20C to +60C
Housing Material:	To match encoder
IP rating:	IP66
Humidity:	98% permissible
Type:	Lithium Thyonide Chloride
Life Time:	About 10 years
up to 100ppr	1 billion data transmissions
above 100 ppr	300 million data transmissions

Receiver Module:
- Click above for a full description of the outputs that can be generated from the receiver module.
- The default output protocol for incremental is the standard quadrature output.. This means the encoder can be replaced 1:1 with one in an existing system. The output is 5V pulses.

Function:
A low power incremental encoder output is fed into a 16 bit up-down counter. Every time the encoder shaft moves, a pulse edge triggers a data transmission to the distant module. Data is read 100 times per second. If the incremental encoder spins to fast, the data transmission jumps from one counter content to another. Every data transmission contains the full 16 bit counter value.

Identity:
Each encoder has a unique identity number in case multiple sensors are purchased. The ID numbers can be customer specified. As default, they be the serial number of the device, this way, there will never be conflicting identities on a system.

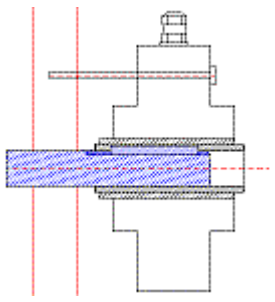
Certifications

IP 66M

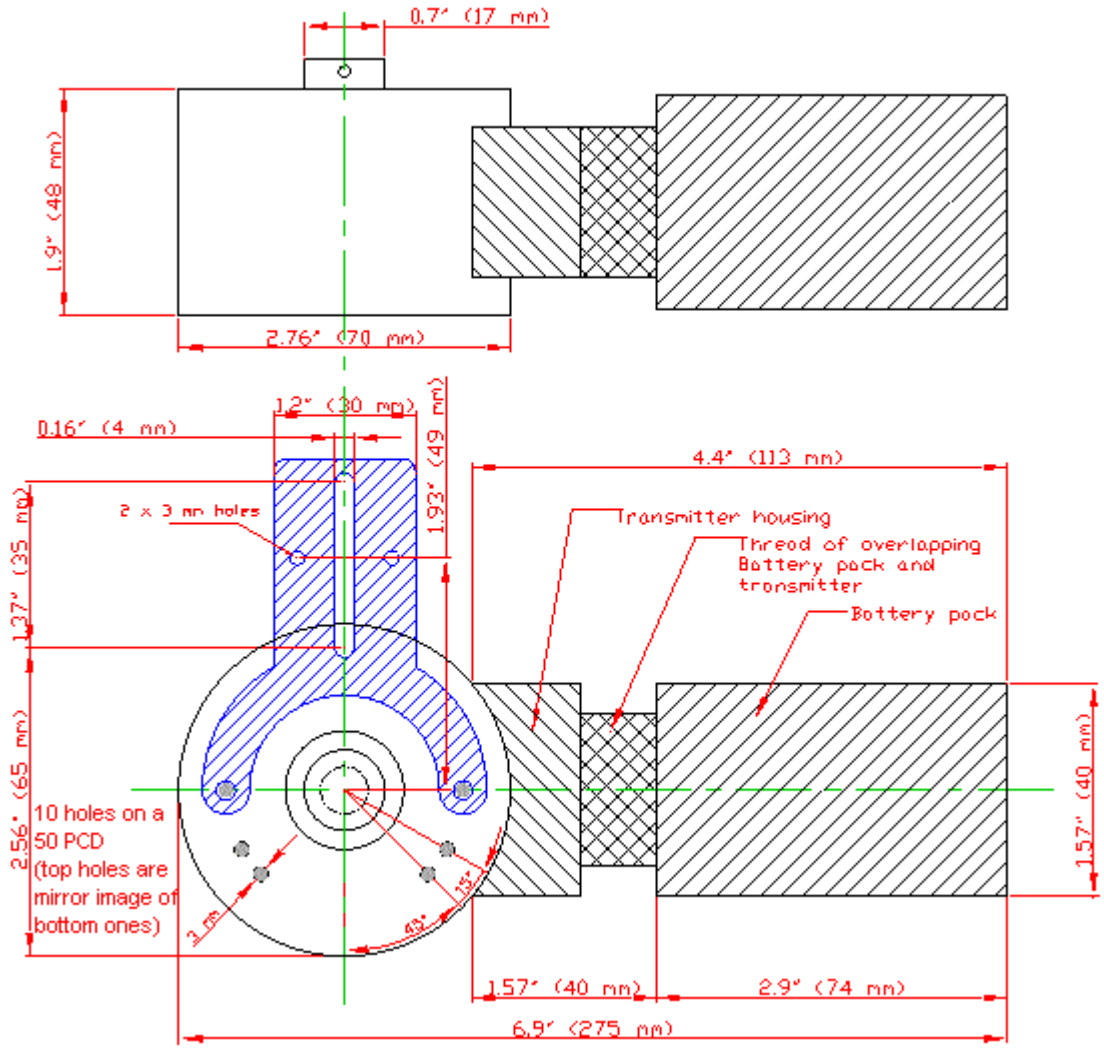
IECEX (IECEx SIR 08-0015X) certificate
ATEX (SIRA 08ATEX2054X) certificate

Mounting Instructions

1. Just before installing encoder onto shaft, screw the battery pack in firmly to the transmitter housing (the clear part)
2. Mount the encoder mechanically as you would any other encoder.
3. On the safe side, plug in the receiver module into the PLC or computer and start reading the data in whatever format you have.
4. The battery can be 'hot-swapped' in the field for a new battery if it does run out.
5. If you will NOT immediately use the encoder, do NOT connect the battery. Only connect the battery right before using.



Dimensions



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Series 14 incremental intrinsically safe hollow shaft encoder - WiFiEx

1 4 X X - X X W H - X X X X

Shaft Size	Incremental Output	Resolution - ppr
12 = 12 mm	13 = Standard Quadrature	
14 = 14 mm	33 = DeviceNet	
20 = 20 mm	08 = XML RS232	
25 = 25 mm	57 = ModBUS	
30 = 30 mm		
40 = 40 mm		
B1 = 1"		

Price: (for encoder + transmitter + battery + receiver)
From 1600.00 US$ (no cable cost, no barrier cost, no engineer installation cost)

Technical Data

Encoder:

Operating Temp:	-20C to +49C
Housing Material:	Die Cast Aluminum
Shaft Material:	Aluminum
IP rating:	IP64
Shaft load:	Supports 'system' weight
Humidity:	98% permissible
Shock:	10mg (6msec)
Vibration:	5g (500Hz)
Shaft Speed:	3000 rpm

Transmitter:

Operating Temp:	-20C to +60C
Housing Material:	Clear Makrolon (plastic)
IP rating:	IP66
Humidity:	98% permissible
WiFi Frequency:	2.4 GHz
Data Rate:	250 kbs

Battery Pack:

Operating Temp:	-20C to +60C
Housing Material:	To match encoder
IP rating:	IP66
Humidity:	98% permissible
Type:	Lithium Thyonide Chloride
Life Time:	About 10 years
up to 100ppr	1 billion data transmissions
above 100 ppr	300 million data transmissions

Receiver Module:
- Click above for a full description of the outputs that can be generated from the receiver module.
- The default output protocol for incremental is the standard quadrature output.. This means the encoder can be replaced 1:1 with one in an existing system. The output is 5V pulses.

Function:
A low power incremental encoder output is fed into a 16 bit up-down counter. Every time the encoder shaft moves, a pulse edge triggers a data transmission to the distant module. Data is read 100 times per second. If the incremental encoder spins to fast, the data transmission jumps from one counter content to another. Every data transmission contains the full 16 bit counter value.

Identity:
Each encoder has a unique identity number in case multiple sensors are purchased. The ID numbers can be customer specified. As default, they be the serial number of the device, this way, there will never be conflicting identities on a system.

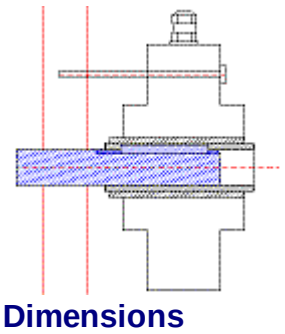
Certifications

IP 64

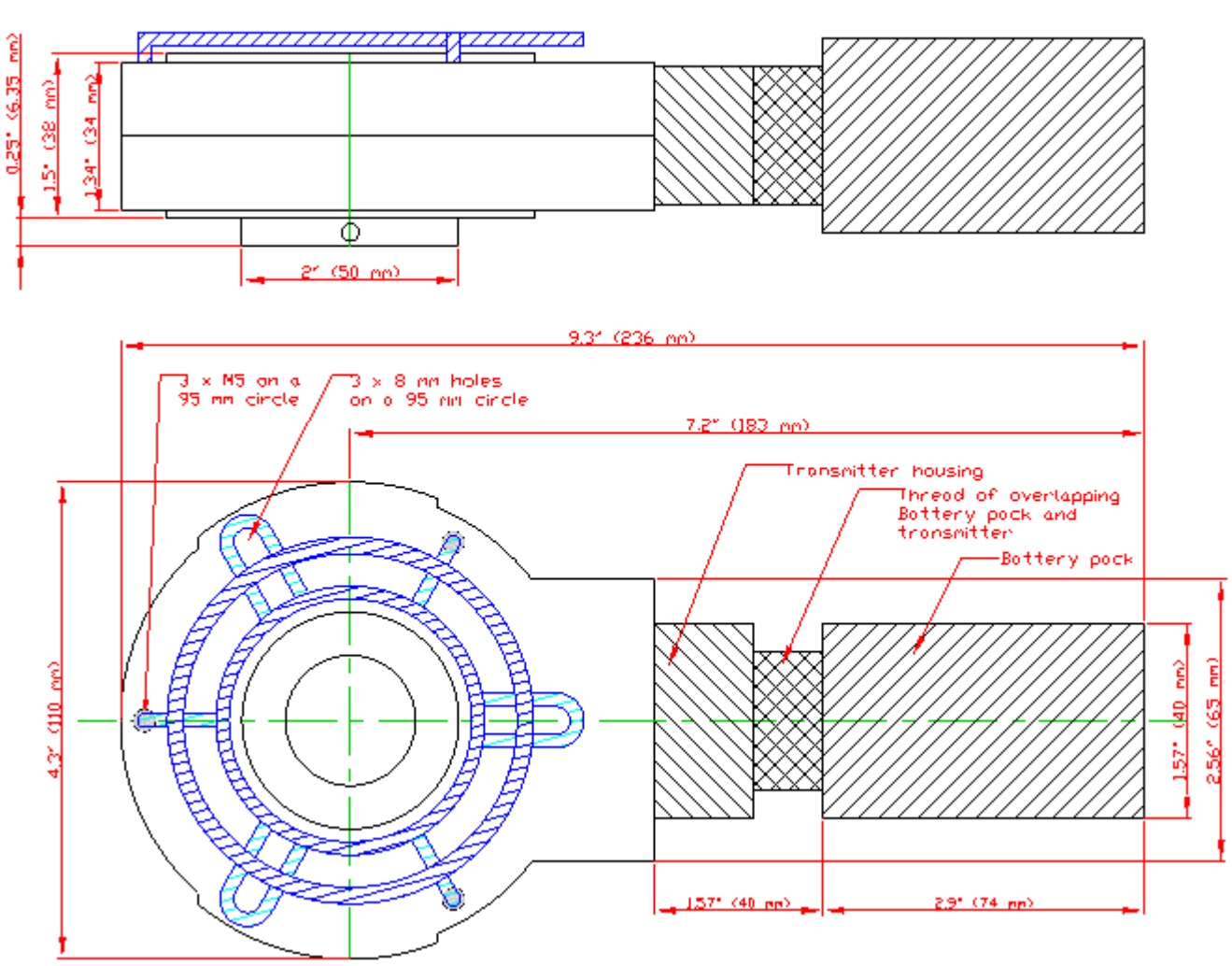
IECEX (IECEx SIR 08-0015X) certificate
ATEX (SIRA 08ATEX2054X) certificate

Mounting Instructions

1. Just before installing encoder onto shaft, screw the battery pack in firmly to the transmitter housing (the clear part)
2. Mount the encoder mechanically as you would any other encoder.
3. On the safe side, plug in the receiver module into the PLC or computer and start reading the data in whatever format you have.
4. The battery can be 'hot-swapped' in the field for a new battery if it does run out.
5. If you will NOT immediately use the encoder, do NOT connect the battery. Only connect the battery right before using.



Dimensions



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hohner WiFiEx

Series 3000 intrinsically safe incremental shaft encoder - WiFiEx

3 X K 1 - X X W X - X X X X

| |___| | Resolution - ppr

Incremental Output
13 = Quadrature
33 = DeviceNet
57 = ModBUS
08 = XML RS232

Protection
A = IP54
B = IP65
C = IP66 Aluminum
D = IP66 S. Steel

Exit
H = Radial
K = Axial

Price: (for encoder + transmitter + battery + receiver)
IP54 and 65: From 1600.00 US$
IP66: Aluminum: From 2200.00 US$
IP66: Stainless Steel: From 3000.00 US$
(no cable cost, no barrier cost, no engineer installation cost)

Highlights:
Same mechanics as classic Hohner TopDrive encoder
Radio Silence option
Data transmission is strong enough to from one end of the rig to the other
E+M fields do not affect function
All standard resolutions possible

Technical Data

Encoder:

Operating Temp:	-20C to +49C
Housing Material:	Aluminum or St. Steel
Shaft Material:	St. Steel
IP rating:	IP54 up to IP66
Shaft load:	Supports 'system' weight
Humidity:	98% permissible
Shock:	10mg (6msec)
Vibration:	5g (500Hz)
Shaft Speed:	3000 rpm

Transmitter:

Operating Temp:	-20C to +60C
Housing Material:	Clear Makrolon (plastic)
IP rating:	IP66
Humidity:	98% permissible
WiFi Frequency:	2.4 GHz
Data Rate:	250 kbs

Battery Pack:

Operating Temp:	-20C to +60C
Housing Material:	To match encoder
IP rating:	IP66
Humidity:	98% permissible
Type:	Lithium Thyonide Chloride
Life Time:	About 10 years
up to 100ppr	1 billion data transmissions
above 100 ppr	300 million data transmissions

Receiver Module:
- Click above for a full description of the outputs that can be generated from the receiver module.
- The default output protocol for incremental is the standard quadrature output.. This means the encoder can be replaced 1:1 with one in an existing system. The output is 5V pulses.

Function:
A low power incremental encoder output is fed into a 16 bit up-down counter. Every time the encoder shaft moves, a pulse edge triggers a data transmission to the distant module. Data is read 100 times per second. If the incremental encoder spins to fast, the data transmission jumps from one counter content to another. Every data transmission contains the full 16 bit counter value.

Identity:
Each encoder has a unique identity number in case multiple sensors are purchased. The ID numbers can be customer specified. As default, they be the serial number of the device, this way, there will never be conflicting identities on a system.

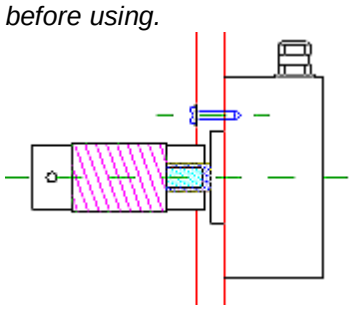
Certifications

IP 54 or 65 or 66

IECEX (IECEx SIR 08-0015X) certificate
ATEX (SIRA 08ATEX2054X) certificate

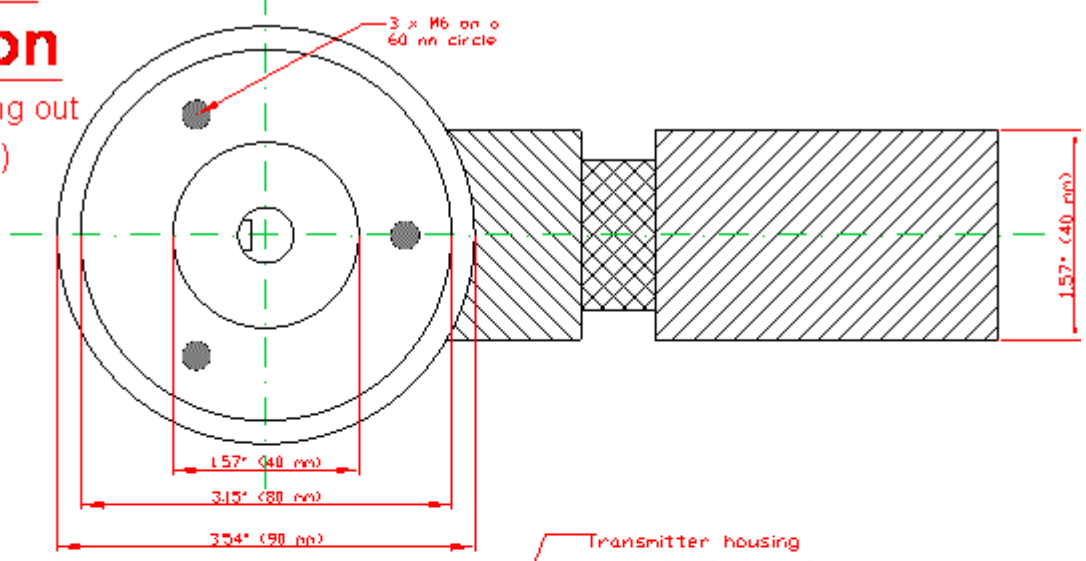
Mounting Instructions

1. Just before installing encoder onto shaft, screw the battery pack in firmly to the transmitter housing (the clear part)
2. Mount the encoder mechanically as you would any other encoder.
3. On the safe side, plug in the receiver module into the PLC or computer and start reading the data in whatever format you have.
4. The battery can be 'hot-swapped' in the field for a new battery if it does run out.
5. If you will NOT immediately use the encoder, do NOT connect the battery. Only connect the battery right before using.

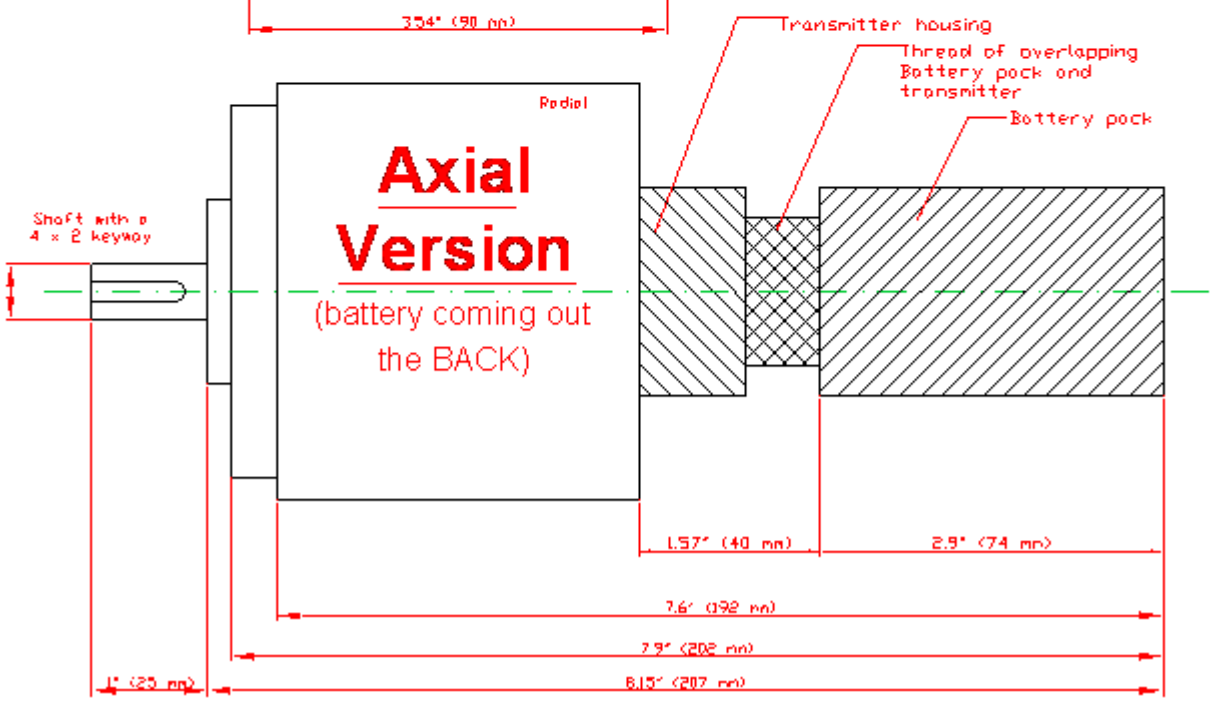


Dimensions

Radial Version
(battery coming out the SIDE)



Axial Version
(battery coming out the BACK)



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hohner WiFiEx

Series 3000 intrinsically safe absolute multiturn shaft encoder - WiFiEx

3 X K 1 - X X W X - M 2 1 2

| |___| | Resolution

| Output | M212 = 12x12 bit

| 06 = 4...20 mA Exit

Protection 33 = DevicceNet K = Axial

A = IP54 08 = XML RS232 H = Radial

B = IP65 57 = ModBUS

C = IP66 Aluminum

D = IP66 S. Steel

Price: (for encoder + transmitter + battery + receiver
IP54 and 65: From 1800.00 US$
IP66: Aluminum: From 2400.00 US$
IP66: Stainless Steel: From 3200.00 US$
(no cable cost, no barrier cost, no engineer installation cost)

Technical Data

Encoder:

Operating Temp:	-20C to +49C
Housing Material:	Aluminum or St. Steel
Shaft Material:	St. Steel
IP rating:	IP54 up to IP66
Shaft load:	Supports 'system' weight
Humidity:	98% permissible
Shock:	10mg (6msec)
Vibration:	5g (500Hz)
Shaft Speed:	3000 rpm

Transmitter:

Operating Temp:	-20C to +60C
Housing Material:	Clear Makrolon (plastic)
IP rating:	IP66
Humidity:	98% permissible
WiFi Frequency:	2.4 GHz
Data Rate:	250 kbs

Battery Pack:

Operating Temp:	-20C to +60C
Housing Material:	To match encoder
IP rating:	IP66
Humidity:	98% permissible
Type:	Lithium Thyonide Chloride
Life Time:	About 10 years
	1 data transmission per 20 s

Receiver Module:

- Click above for a full description of the outputs that can be generated from the receiver module.
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Function:

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Identity:

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Certifications

IP 54 or 65 or 66

IECEX (IECEx SIR 08-0015X) certificate

ATEX (SIRA 08ATEX2054X) certificate

Mounting Instructions

1. Just before installing encoder onto shaft, screw the battery pack in firmly to the transmitter housing (the clear part)
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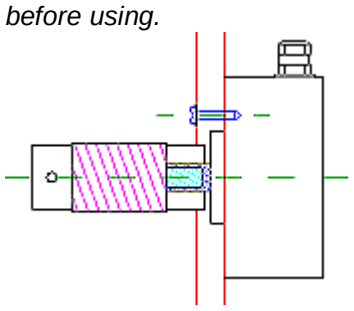
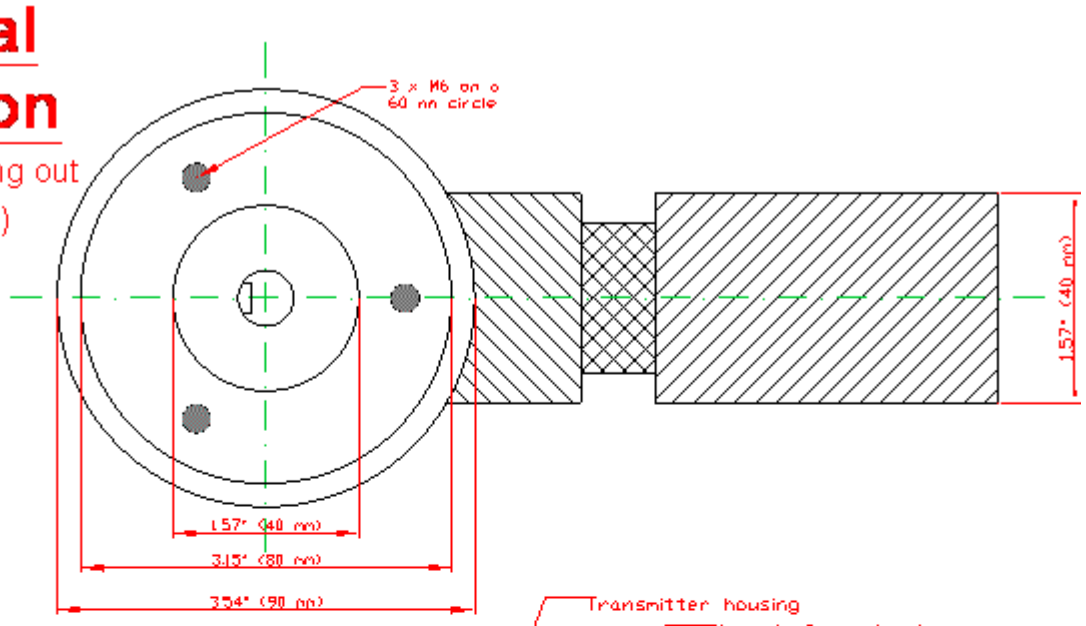


Dimensions

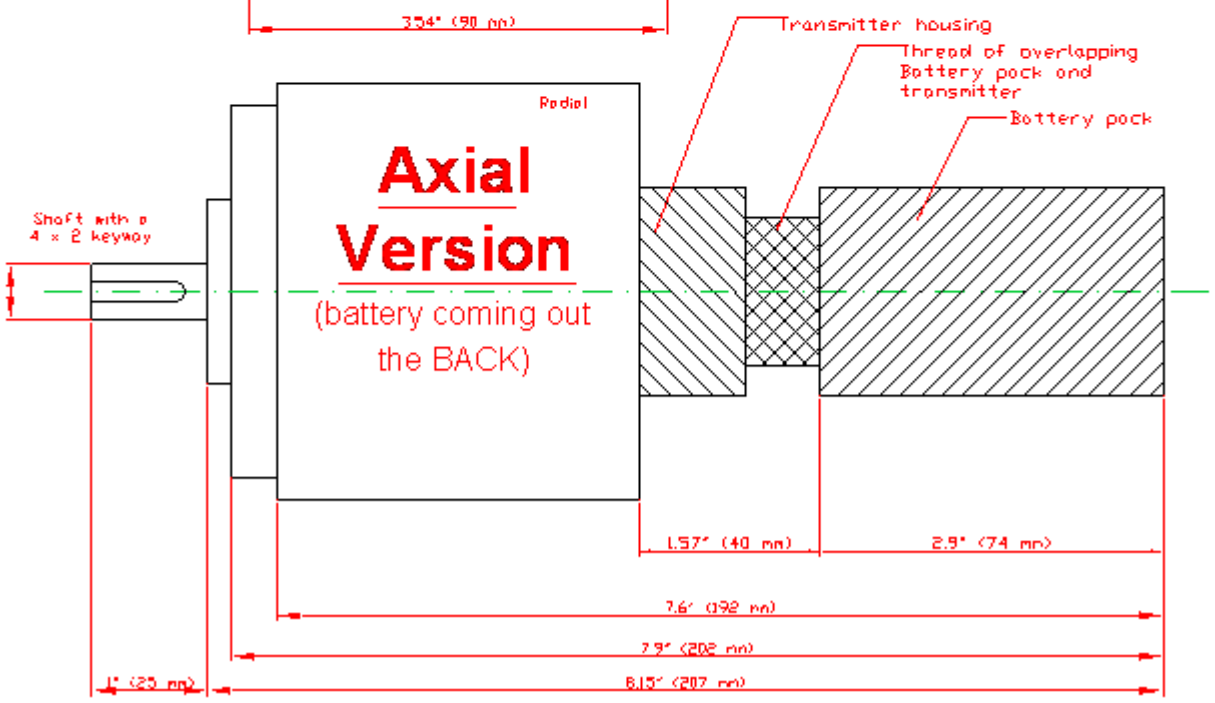
Radial Version

(battery coming out the SIDE)



Axial Version

(battery coming out the BACK)



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hohner WiFiEx

Intrinsically Safe Series 'EX' liquid quality sensor for 1/2" pipe thread - WiFiEx

EX W X H

Output
R = XML RS232
M = ModBUS
4 = 4...20 mA

Price: (for sensor + transmitter + battery + receiver)
From 2000.00 US$£ (no cable cost, no barrier cost, no engineer installation cost)

Technical Data

Sensor:

Operating Temp:	-20C to +49C
Housing Material:	St. Steel
Threads:	1/2" pipe thread
IP rating:	IP66

Transmitter:

Operating Temp:	-20C to +60C
Housing Material:	Clear Makrolon (plastic)
IP rating:	IP66
Humidity:	98% permissible
WiFi Frequency:	2.4 GHz
Data Rate:	250 kbs

Battery Pack:

Operating Temp:	-20C to +60C
Housing Material:	To match encoder
IP rating:	IP66
Humidity:	98% permissible
Type:	Lithium Thyonide Chloride
Life Time:	About 10 years
	1 data transmission per 60 s

Receiver Module:
- Click above for a full description of the outputs that can be generated from the receiver module.
- The default output protocol is RS232, which can be read and viewed with the Hyper Terminal in windows and also with the most common data acquisition software packages such as Labview, Daisy, WonderWare, WinWedge and Excel.
- Other outputs can be ModBus or 4...20 mA

Principle of Measurement
Click on the above link to access the patent with all the measurement principles (in PDF format)

Function:
Click above to see

Identity:
Each sensor has a unique identity number in case multiple sensors are purchased. The ID numbers can be customer specified. As default, they be the serial number of the device, this way, there will never be conflicting identities on a system.

Certifications

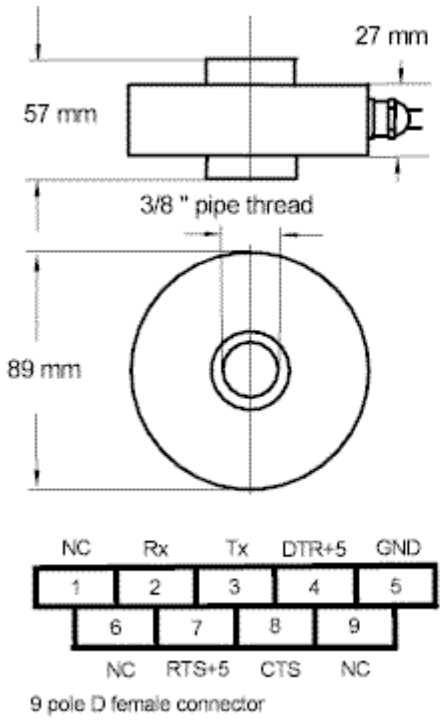
IP 66

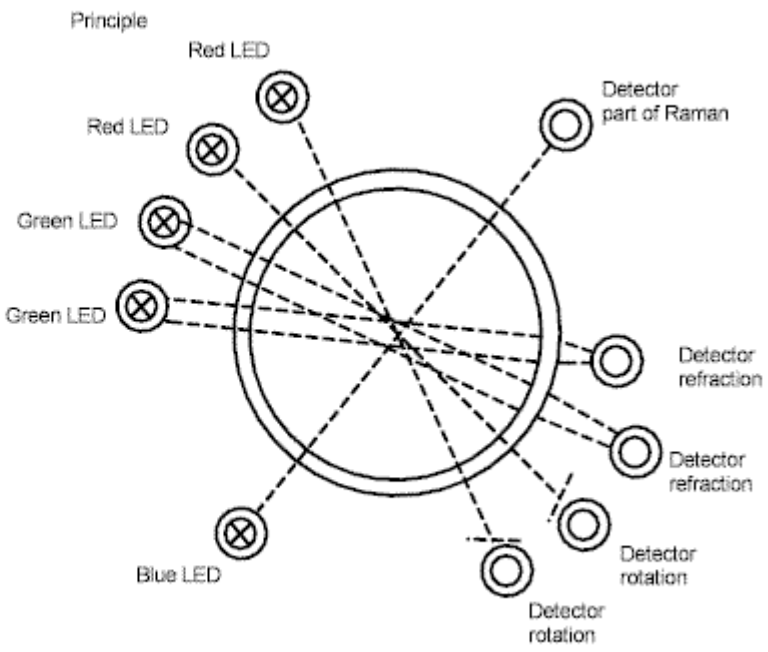
IECEX (IECEx SIR 08-0015X) certificate
ATEX (SIRA 08ATEX2054X) certificate

Mounting Instructions

1. Just before installing sensor onto the pipe, screw the battery pack in firmly to the transmitter housing (the clear part)
2. Mount the sensor mechanically as you would any other sensor on a pipe.
3. On the safe side, plug in the receiver module into the PLC or computer and start reading the data in whatever format you have.
4. The battery can be 'hot-swapped' in the field for a new battery if it does run out.
5. *If you will NOT immediately use the encoder, do NOT connect the battery. Only connect the battery right before using.*

Dimensions





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hohner WiFiEx

Series INHO intrinsically safe incremental shaft encoder - WiFiEx

H X K 1 - X X W X - X X X X

Protection
A = IP54
B = IP65

Incremental Output
13 = Quadrature
33 = DeviceNet
57 = ModBUS
08 = XML RS232

Exit
H = Radial
K = Axial

Resolution - ppr

Price: (for encoder + transmitter + battery + receiver)
IP54 and 65: From 1200 US$ (no cable cost, no barrier cost, no engineer installation cost)

Technical Data

Encoder:

Operating Temp:	-20C to +49C
Housing Material:	Aluminum
Shaft Material:	St. Steel
IP rating:	IP54 up to IP65
Shaft load:	Supports 'system' weight
Humidity:	98% permissible
Shock:	10mg (6msec)
Vibration:	5g (500Hz)
Shaft Speed:	3000 rpm

Transmitter:

Operating Temp:	-20C to +60C
Housing Material:	Clear Makrolon (plastic)
IP rating:	IP66
Humidity:	98% permissible
WiFi Frequency:	2.4 GHz
Data Rate:	250 kbs

Battery Pack:

Operating Temp:	-20C to +60C
Housing Material:	To match encoder
IP rating:	IP66
Humidity:	98% permissible
Type:	Lithium Thyonide Chloride
Life Time:	About 10 years
up to 100ppr	1 billion data transmissions
above 100 ppr	300 million data transmissions

Receiver Module:
- Click above for a full description of the outputs that can be generated from the receiver module.
- The default output protocol for incremental is the standard quadrature output.. This means the encoder can be replaced 1:1 with one in an existing system. The output is 5V pulses.

Function:
A low power incremental encoder output is fed into a 16 bit up-down counter. Every time the encoder shaft moves, a pulse edge triggers a data transmission to the distant module. Data is read 100 times per second. If the incremental encoder spins to fast, the data transmission jumps from one counter content to another. Every data transmission contains the full 16 bit counter value.

Identity:
Each encoder has a unique identity number in case multiple sensors are purchased. The ID numbers can be customer specified. As default, they be the serial number of the device, this way, there will never be conflicting identities on a system.

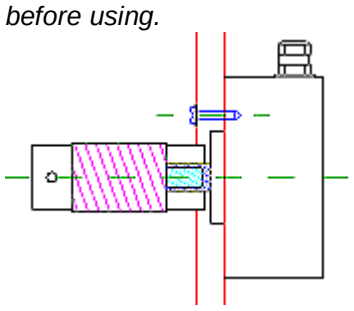
Certifications

IP 54 or 65

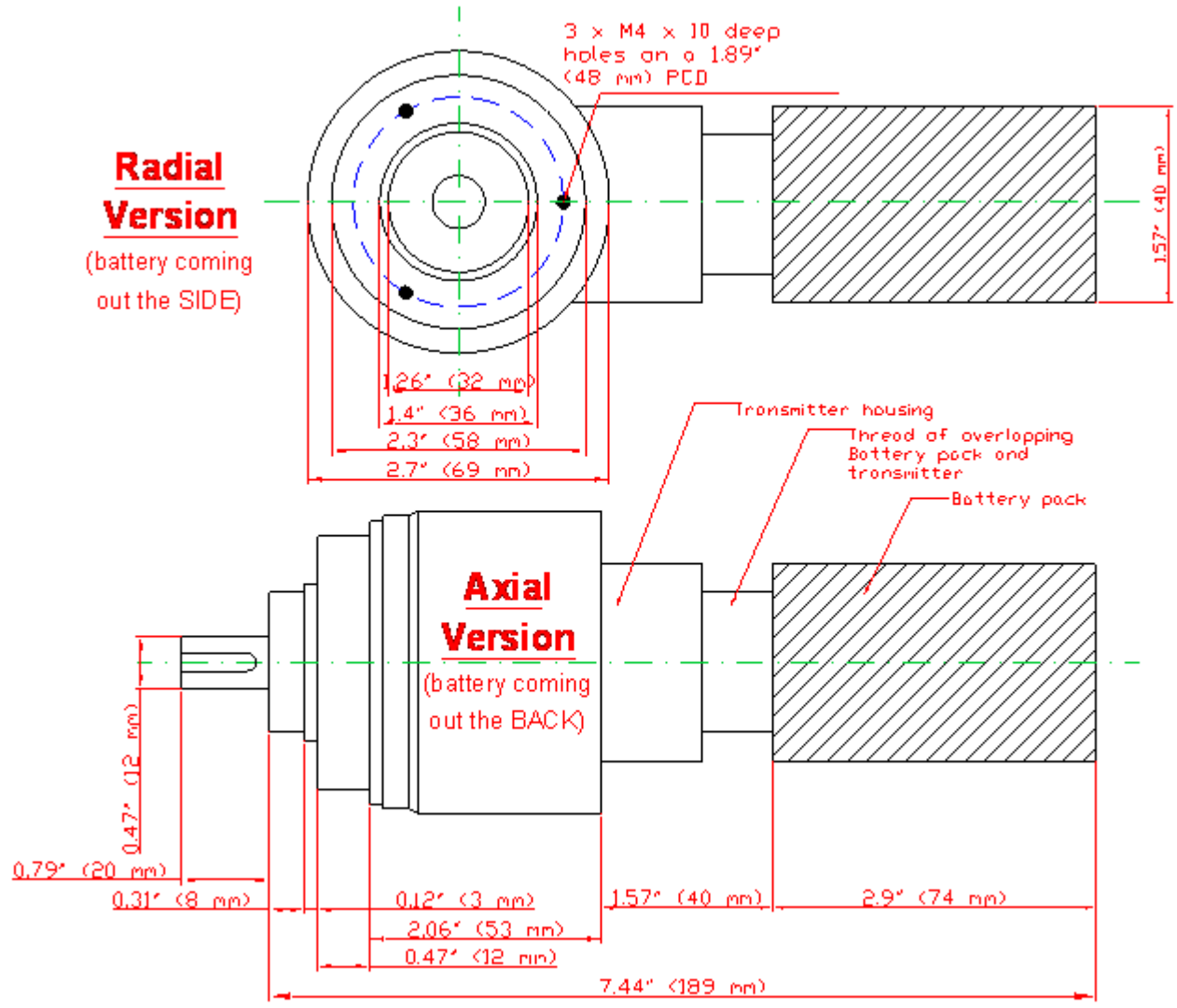
IECEX (IECEx SIR 08-0015X) certificate
ATEX (SIRA 08ATEX2054X) certificate

Mounting Instructions

1. Just before installing encoder onto shaft, screw the battery pack in firmly to the transmitter housing (the clear part)
2. Mount the encoder mechanically as you would any other encoder.
3. On the safe side, plug in the receiver module into the PLC or computer and start reading the data in whatever format you have.
4. The battery can be 'hot-swapped' in the field for a new battery if it does run out.
5. If you will NOT immediately use the encoder, do NOT connect the battery. Only connect the battery right before using.



Dimensions



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Series NAMFPX intrinsically safe incremental hollow shaft encoder - WiFiEx

N A M F P X X X X W G R / X X X X

Shaft Size	Output	Resolution - ppr
14 = 14 mm	L = Quadrature	
16 = 16 mm	D = DeviceNet	
20 = 20 mm	M = ModBUS	
25 = 25 mm	R = XML RS232	
30 = 30 mm		
AA = 1"		

Price: (for encoder + transmitter + battery + receiver)
From 2400.00 US$ (no cable cost, no barrier cost, no engineer installation cost)

Highlights:
Same mechanics as classic Hohner DrawWorks encoder
Radio Silence option
Data transmission is strong enough to from one end of the rig to the other
E+M fields do not affect function
All standard resolutions possible

Technical Data

Encoder:

Operating Temp:	-20C to +49C
Housing Material:	Hard Anodized Aluminum
Shaft Material:	St. Steel
IP rating:	IP66M
Shaft load:	Supports 'system' weight
Humidity:	98% permissible
Shock:	10mg (6msec)
Vibration:	5g (500Hz)
Shaft Speed:	3000 rpm

Transmitter:

Operating Temp:	-20C to +60C
Housing Material:	Clear Makrolon (plastic)
IP rating:	IP66
Humidity:	98% permissible
WiFi Frequency:	2.4 GHz
Data Rate:	250 kbs

Battery Pack:

Operating Temp:	-20C to +60C
Housing Material:	To match encoder
IP rating:	IP66
Humidity:	98% permissible
Type:	Lithium Thyonide Chloride
Life Time:	About 10 years
up to 100ppr	1 billion data transmissions
above 100 ppr	300 million data transmissions

Receiver Module:
- Click above for a full description of the outputs that can be generated from the receiver module.
- The default output protocol for incremental is the standard quadrature output.. This means the encoder can be replaced 1:1 with one in an existing system. The output is 5V pulses.

Function:
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Identity:
Each encoder has a unique identity number in case multiple sensors are purchased. The ID numbers can be customer specified. As default, they be the serial number of the device, this way, there will never be conflicting identities on a system.

Certifications

IP 66M

IECEX (IECEx SIR 08-0015X) certificate

ATEX (SIRA 08ATEX2054X) certificate

Mounting Instructions

1. Just before installing encoder onto shaft, screw the battery pack in firmly to the transmitter housing (the clear part)
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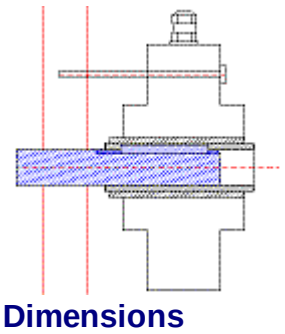

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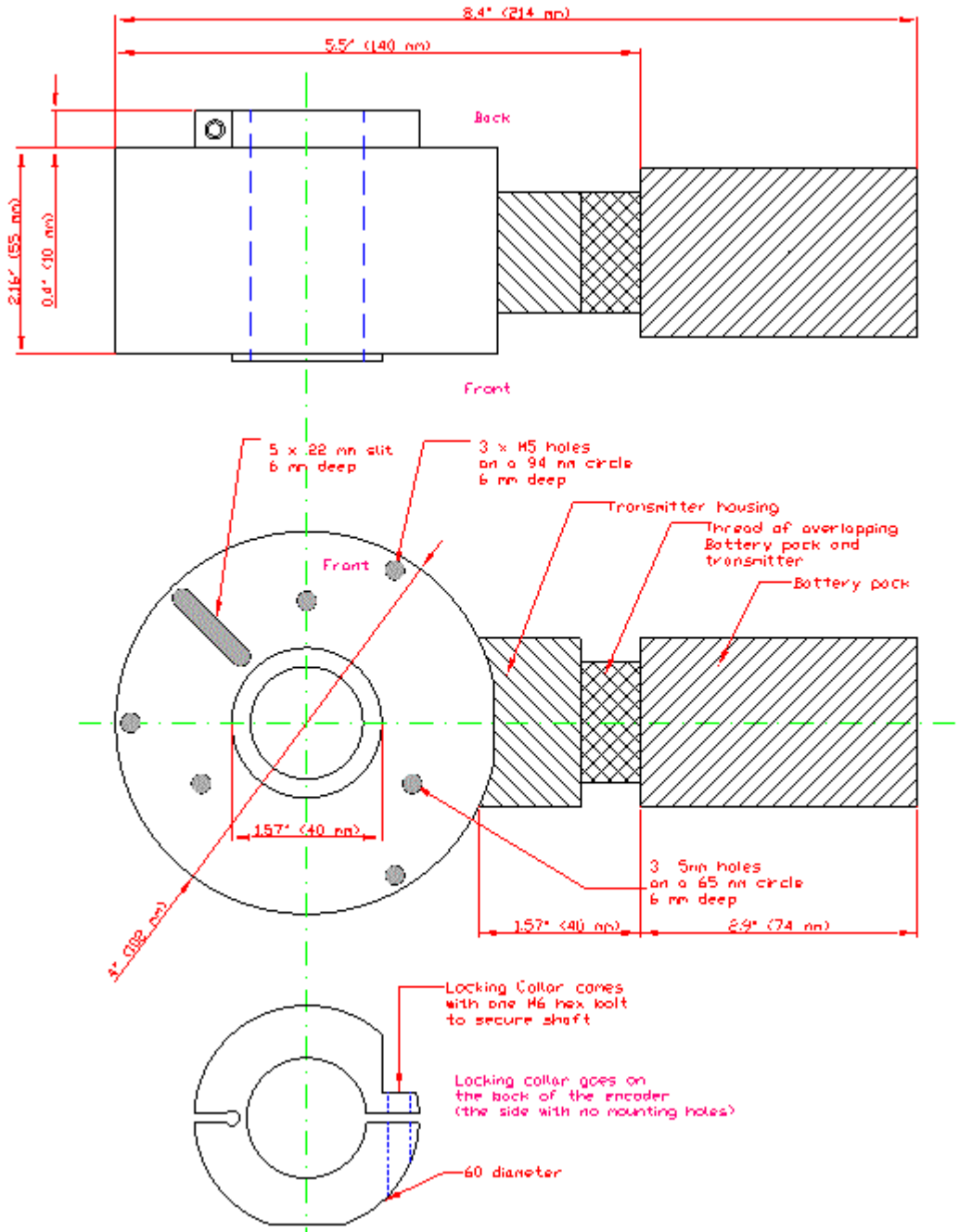

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